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Progress Through Partnership

IMM

Institute for Medicaid Management

JOURNAL for MEDICAID MANAGEMENT

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THE INSTITUTE FOR MEDICAID MANAGEMENT

The Institute for Medicaid Management (IMM) was established to provide training and technical assistance to States, to facilitate the exchange of pertinent ideas in the Medicaid program and to point out effective practices of the States. IMM's goal is to bring about improved management of the Medicaid program so that medical care for the poor and medically needy can be provided in an affordable and effective way.

To achieve this goal, IMM plans to use a multi-faceted approach:

- to lead conferences and workshops covering subjects useful to the States;
- to issue publications covering exemplary State practices, conference proceedings, current approaches to specific problems and other stimulating ideas on health programs in general;
- to provide on-site technical assistance to States and to coordinate technical assistance efforts of the Medicaid Bureau; and
- to evaluate State training needs, to develop curriculum based on this evaluation and to provide training material for State staff utilizing the curriculum.

This publication serves as a vehicle for dissemination of various State solutions to problems, innovative ideas and articles of general and special interest to State Medicaid Managers and staff.

We welcome articles on any subject related to the Medicaid program. We are particularly interested in receiving articles from State agency representatives. Responses to previously published material are also welcome.

We see this publication as a joint Federal/State effort. If it is to be successful, we must have contributions from the States as well as your views on how well we are meeting your needs.

Please forward all communications, contributions, requests for information and materials to:

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IMPROVING HEALTH CARE FINANCING- A CONSTRUCTIVE APPROACH*

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Thank you for this opportunity to meet with you and discuss some of this Administration's concerns and proposals for improvement in the field of health care financing. Your President, Martin Sabo, has suggested hospital cost containment, Medicaid reform, and national health insurance are timely topics.

I agree not only with the importance of the issues but with the order in which President Sabo lists them. Our most immediate goal is to get control of runaway hospital costs, while moving simultaneously toward better management of Medicaid expenditures. Only when we make progress on these two matters, in my view, can we move toward a realistic program of national health insurance. Such insurance is not some magical answer that will spare us the hard task of correcting our existing problems in health care financing. There is much preliminary spadework to be done before we can inaugurate a successful national health insurance program.

That is one reason why Secretary Califano's reorganization of the Department of Health, Education, and Welfare created a new Health Care Financing Administration (HCFA) and brought together Medicaid and Medicare, our two major public health delivery and health financing programs. The reorganization also united staff in long-term care programs, the management of the Professional Standards Review Organization program, and other quality assurance activities related to reimbursement.

The basic goal of HCFA is to strengthen the integrity of our health care programs and develop capacity for future expansion to service a universal health insurance program. We want to be sure that, to the extent possible, the right services are getting to the right people in the right quantity at the right time and at the right price. I accepted this challenging new position because I am concerned, as I am sure you are, too, that all Americans should be able to obtain quality health care without having to give up other necessities of life.

The Health Care Financing Administration is an agency of about 4,200 persons responsible for a budget of $40 billion in Federal funds to serve some 45-50 million Americans. The mission of HCFA offers the potential for substantial savings. We expect to improve program management and to unify the setting of cost standards and the surveying and certification of providers. We would like to initiate reforms in reimbursement and redirect incentives away from high cost technological care. These are large but essential tasks.

Hospital Cost Containment

The sharply rising cost of health care is one of this Nation's most pressing problems. Since 1950, national health expenditures have jumped from $12 billion, or 4.5% of our Gross National Product, to almost $140 billion in 1976, or 8.6% of the current GNP. This figure could reach 10% by 1980, unless effective action is taken soon.

Everyone is being hurt by this rise — the poor because they are getting fewer services;

*Address by Mr. Derzon, to the Third Annual Meeting of the National Conference of State Legislatures, Detroit, Michigan, August 4, 1977.

the rich and the middle class because they are paying for their own services as well as for those of the poor. Health care now costs us $638 per person annually and will reach $1,085 in 5 years unless checked. That would amount to about $5,000 a year for the average American family. Government dollars will finance much of the increase and government by then will be paying 45% of these costs. The implication to the taxpayer and the State legislator are clear and ominous. In the next 5 years, nursing home costs will rise 2 1/2 times over those for fiscal year 1976. Auto workers in this city now pay $1.00 an hour for health care coverage. Since 1965, the average hospital stay has jumped from less than $350 to more than $1,300. These few statistics make it obvious that swift action on health care expenditures is essential.

As a first step, President Carter and Secretary Califano are giving high priority to reducing the rapid escalation of hospital costs. The Administration's Hospital Cost-Containment Act of 1977 (H.R. 6575; S. 1391) is now before Congress.

This Administration bill contains five major provisions:

A) It limits increases in total hospital revenues to a 9% annual rate beginning next October.

B) The program would cover inpatient revenues of some 6,000 acute-care and specialty hospitals.

C) The limit would be set by a formula reflecting economic price trends.

D) Third-party payers would work with hospitals throughout the year to monitor charges.

E) A national limit of $2.5 billion would be established for new capital expenditures by acute-care hospitals.

The proposed legislation is geared to allow a variety of adjustments and exceptions under conditions specified in the bill. The program, however, is basically simple to administer and requires no new audits or monitoring programs.

We are currently in the process of evaluating a number of proposed amendments to the bill. I have had an opportunity to review the statement by the National Conference of State Legislatures commending the Administration's proposal, as well as your suggestions for its amendment. The Department, as you know, did meet first with NCSL's Human Resources Committee and later with other representatives to get your suggestions before the proposed legislation was drafted.

We are looking into your special concern that the Administration bill does not go far enough toward recognizing and supporting a strong State role in the regulation of hospital costs. We agree with you that recognition should be given to those States that have developed their own comprehensive cost containment systems. Such State initiatives often are more sophisticated and better adapted to State concerns than those called for in a single national effort. Hospitals in States which receive a Federal waiver would not be covered by the Federal program provided their programs would constrain hospital costs at least as effectively as the Federal program does.

Hospitals also could be exempt from Federal requirements on a Statewide basis if all of a State's hospitals were engaged in an experiment or demonstration project established under the strict experimentation criteria of present law. Such provisions serve two purposes:

1) They assure all parties — States, providers, private insurance carriers and patients — that strict, uniform standards will be applied to these special State programs that are consistent with the objectives of the Federal program.

2) They protect States from pressures that could be applied by groups seeking weak cost containment programs.

We believe these points deal appropriately with the question of Federal and State roles in health care administration and reflect our position of noninterference with State programs that have demonstrated their effectiveness in containing hospital costs.

Medicaid Administration

The relationship between Federal and State governments in the Medicaid program is much more complex, however.

Medicaid is a massive health program which in fiscal 1977 will spend approximately $18 billion to purchase care for more than 22 million people. Of this amount, States will contribute

$7.8 billion and the Federal government the other $10.2 billion. This amounts to expenditures of $809 per recipient.

Some believe that Medicaid's expenditures are high because the health needs of poor persons are greater than those in the general population. Others claim that Medicaid costs are distorted by the small proportion of recipients who use such expensive services as nursing home care. Institutions consume about 70% of all Medicaid dollars, of which hospitals get 32% and long-term care facilities 38%. Another 4.4% of program expenditures, or $788 million, will be spent this year to administer the program at the Federal and State levels. Although it is commonly believed that Medicaid provides health care for all the Nation's poor, it is estimated that only some 60% of that group receive Medicaid benefits.

The program's growth in recent years has moved Medicaid into the national spotlight. Increased Medicaid expenditures reflect a number of factors, including changes in health care prices, the size and characteristics of the Medicaid population, and the type of benefits provided by Medicaid. Medicaid now provides 50% of all dollars going into nursing home care, a very expensive service, and accounts for more than 90% of all public expenditures for this service.

Regardless of the reasons for Medicaid's growth, its impact on Federal, State and local budgets is substantial and this fact underscores the urgency of improving the management and financing of health services for the poor. Bringing expenditures under control and demonstrating that the system is properly managed is what the public has a right to expect. It is our best way of assuring that the precious dollars are directed to where they are needed the most.

Because I am new to Federal management of Medicaid, I have had an opportunity to take a detached look at how we arrived at our present problem. There are a few people who believe that the Federal government and the States now have this massive program under control, but I am not satisfied. It seems to me that the Federal and State governments have severely undermanaged Medicaid for a decade. The Federal government is awakening and so, too, are States. That's an encouraging sign.

The job of designing and managing a State Medicaid program is extremely complicated — far more so than practically any other State activity you supervise or operate. Few State Medicaid administrators have been experienced health care services managers. Medicaid often has been viewed as a conventional welfare operation when, in fact, it is not. There was never a cadre of ready-made, knowledgeable managers to deal with the complexities. Nor did States provide adequate staff numbers to cope with the problems.

A few examples of our defects are useful:

1) Last year Medicaid Quality Control which measures States' performance on Medicaid eligibility revealed almost $1 billion of services paid for by Federal and State governments that should not have been paid. In fiscal 1977, $1.2 billion of services will go to ineligible persons. That deprives the deserving poor, since States often narrow the scope of the benefits under the Medicaid program to stay within their budgets.
2) Because of poor data and inadequate management systems, Medicaid is underwriting costs that should be borne by third-party private insurance. In some States Medicaid also is paying thousands of claims of providers with few, if any, monitoring controls.
3) In some States, the responsibility for Medicaid administration is still divided among several government agencies, a sure route to lack of accountability and financial disaster. If, as some have estimated, 5-10% of all expenditures are financing fraudulent or abusive practices, there is obviously much that needs to be done. Several States, in fact, are doing better than others. Among the 53 Medicaid programs, some have had consistently good overall management and a number perform selected functions in an exemplary fashion. Texas successfully manages the drug program. Michigan has an effective fraud and abuse program. Minnesota has an effective third-party liability recovery system.

These examples demonstrate that technology and management practices exist to operate Medicaid effectively. Success in some States

raises the question of why others have failed to attain a reasonable quality standard. I believe such failure is an indication of the lack of constructive — and I emphasize constructive — attention which the Federal government together with some State legislatures and Governors have given to Medicaid during its first decade of existence. Too often, each of us has been more concerned with exposing the system's problems than with creating the resources needed to solve those problems.

I also believe we occasionally have placed an unfair burden on our State Medicaid officers. HEW, Congress, and State legislatures have been unrealistic in their expectations of how fast State executive branch components can catch up with and implement rule changes. There is some evidence of pressure on legislators, and hence on the managers, by overly zealous lobbyists. For years, State Medicaid directors have been frustrated as they sought a moderate budget to operate programs in the tens and hundreds of millions, and now in some States, in the billions. For years, too, the Federal government has promised technical assistance and delivered on that promise infrequently, at best.

I'm not so naive as to expect massive new doses of manpower to manage Medicaid. We in HCFA, however, are going to move our resources around in an effort to devote more to Medicaid. Right now the ratio of Medicare to Medicaid staff is almost 4-1. We are going to make more Medicare expertise available to Medicaid and we're going to consolidate similar functions in the two programs.

No matter what you do, I hope you will appreciate that the best of managements will have a difficult task because this is not just another State activity.

Let me explain what managing Medicaid involves:

- Assessing which portion of your poor and near poor populations will be eligible.
- Assessing what their health needs are.
- Assessing what services you plan to provide to meet those needs.
- Determining whether you currently have enough health care providers within your State to provide the services you want delivered.
- Deciding how to purchase available services or how to create additional provider capacity most effectively.
- Negotiating agreements with very large and sophisticated groups of providers, some of whom increasingly are dependent on a Medicaid cash flow. Negotiating rates with large provider groups that employ a battery of accountants and lawyers is tough work. Further there is strong lobbying from the special interest groups which, if acceded to, creates extra problems for the Medicaid administrator.

Medicaid eligibility is a jungle of administrative rules. Requirements are not easily understood by professionals, much less by an ill-informed recipient community. The day-to-day functions of processing millions of claims and trying to police recipients and thousands of providers adequately is a mammoth task, even under the best of conditions. But when a Governor sends an inadequately staffed and poorly structured Medicaid organization to perform that job, the results become predictably bad.

Because this is such a complex program to design and manage, the legislative oversight function is vital. I wonder how many legislatures have the resources to meet this challenge. When you appropriate State funds ranging from tens of millions to hundreds of millions of dollars:

- Do you know that your State's Medicaid program reaches the correct target population?
- Do you have a proper mix of preventive, acute, and long-term care to raise health status and lower cost? Was the growth of your hospital and nursing home costs planned, or was it something that caught you by surprise?
- How do you decide whether your funds are purchasing good quality care? Have you visited a cross-section of your State's nursing homes or talked with a dozen recipients (or users) of Medicaid? You ought to in order to find out whether these huge expenditures are buying what you thought they were buying.
- How do you compare with other States in number of ineligibles, in claims processing failures and a host of other measures?

Each State ought to have a core group of legislators interested in and fully understanding of what may well be their largest single operating program, not simply to criticize and watchdog but to serve Medicaid managers who have serious problems which, involuntarily, require periodic legislature intervention.

There also is a massive Federal responsibility to the Medicaid program, and we have initiated a number of efforts designed to give States the support they need to manage the program effectively.

Complex Federal program regulations constitute the basis for actions taken at the State and local levels. These regulations sometimes have hindered operational management and tied up resources which could have been used to resolve operating problems. Medicaid regulations are being recodified with advice of the States. We expect to publish a major section of redrafted, coherent regulations in the fall. Eventually, a full set of rewritten regulations will provide States with cohesive, simplified program direction.

Expanded Federal assistance in evaluating State operations will be pursued in a number of ways. State reviews will be conducted in 12 States during fiscal year 1978. The focus of these reviews will be to identify critical operating problems and to arrange for the provision of technical assistance.

Evaluation data is most useful to States when it is provided on a comprehensive, rather than a fragmented, basis. For that reason, HCFA is attempting to combine major on-site reviews of State operations. It is anticipated that recipient eligibility, Early and Periodic Screening, Diagnosis and Treatment of children, compliance, financial and other reviews will be consolidated into an annual State assessment. This will reduce the demands placed on States and provide State administrators and others with a comprehensive management report.

We also intend to provide States with additional management information comparing one State to another. As you know, the Medicaid Management Reports supply comparative program data on a quarterly basis. A similar approach has been proposed for the provision of management data. The system also would provide comparative performance data, which would include statistical information collected through the Medicaid Eligibility Quality Control, Early and Periodic Screening, Diagnosis and Treatment and Utilization Control reviews, as well as data related to claims processing, administrative costs, provider participation, and erroneous expenditures.

We are in earnest in developing a stronger Institute for Medicaid Management. The Institute, as you know, is the center for Federal technical assistance to State Medicaid programs. In fiscal year 1977, it conducted both national and regional technical assistance programs. Erroneous claims payment, prospective reimbursement, and utilization review were among the problems addressed through the Institute's national conferences.

Universal Health Insurance

Once we get better control over our two immediate crises — hospital cost containment and Medicaid — then we can place greater emphasis on the longer-range challenge of national health insurance. The current system, we all know, is expensive, inequitable and inadequate. About 18 million Americans are now completely without health insurance, and another 19 million low-income persons have inadequate individual insurance coverage. In fact, nearly half the population under age 65 is not sufficiently covered for major medical expenses.

A national health insurance program is a necessity, and we have begun the planning effort. I am serving on both the Under Secretary's advisory committee and the Department's steering committee for developing a national health insurance system. But it is essential to get control over our inflationary national health costs first, or national health insurance simply would subsidize a system that devours resources at runaway rates without delivering the kind and quality of health care we really need — especially for those who can least afford it.

The basic elements of our short- and long-term program to improve health care, therefore, must focus on all three elements:

— Hospital cost containment

— Medicaid management improvement
— National health insurance

We no longer can put off making improvements in our health care financing system. Every day's delay sees an increase of $20 million in hospital costs. In a short time, this could make the costs of national health insurance prohibitive.

What is needed now are the dedicated efforts of everyone — health professionals, institutions, insurers, suppliers, legislators, and citizens alike — to avert an even-greater crisis in the area of national health care.

As legislators, you are a critical force in health care and health care financing and have a huge stake in the outcome of this debate over national health insurance. In that debate, one major question will be whether States can manage complex systems and assure Federal beneficiaries the care that is promised. Skeptics say, "no, - look at Medicaid - States are spending billions of their own money and it is poorly managed or at least under-managed."

We need to do better - you need to do better - and the sooner we begin a coordinated effort, the better off millions of Americans will be.

As Administrator of Health Care Financing Administration, Mr. Derzon, 46, heads a new HEW agency responsible for the management of $40 billion in Federal Medicaid and Medicare funds. Formerly the Director of Hospitals and Clinics for the University of California, Mr. Derzon has 22 years of experience in hospital administration. He entered the field of hospital administration in 1955 as an administrative assistant with the Rhode Island Hospital in Providence.

Subsequently Mr. Derzon became Associate Administrator of the University Hospital, New York University Medical Center and then served on the Commission of Hospitals for New York City. He assumed his former post in California in 1970.

He received bachelor's and master's degrees from Dartmouth College and is a graduate of the University of Minnesota Program in Hospital Administration.

CONTROLLING ELIGIBILITY ERRORS IN THE MEDICAID PROGRAM

by VICTOR KUGAJEVSKY, Ph.D.
ALLAN LAZAR, M.B.A.

Among the challenges that the administrator of a State Medicaid program faces today is the prevention of erroneous payments. Erroneous payments include those to providers for fraudulent and abusive billings, those for Medicaid coverage for ineligible recipients and those for unauthorized services, or to unauthorized providers. Inadequate management control in these areas result in substantial losses.

On a national basis, estimates of total dollar losses from provider fraud and abuse range in the area of $800 million to $1 billion; losses from payments for medical services to ineligibles (calculated from the Medicaid Quality Control System) are about $1.2 billion for fiscal year '77; losses from failure to recover funds from liable third parties are estimated at $300 million per year. In short, anywhere from 10 to 15% of Medicaid program expenditures are at risk, and quite often are lost through erroneous expenditures.

It is imperative that adequate management controls be developed and implemented to stop this waste of dollars. This paper describes a successful, proven technique—error prone profiling—for reducing losses from one of the most troublesome areas in Medicaid management: ineligibility errors.

Background

The origins of error prone profiling date back almost a century. In the late eighteen seventies an Italian economist named Vilfredo Pareto made what he found to be a startling discovery. Pareto, in writing about the history of various Italian city states and compiling statistics and demographic characteristics about them, made this surprising observation: well over 80% of the wealth of all the city states was controlled by fewer than 20 percent of its citizens. From this observation Pareto went on to examine its underlying causes. After several years of extensive research, he came to the conclusion that there was a basic law which was operating. He stated this law in the following terms: the majority of valuable and important things in human endeavors are accounted for by a small minority of individuals. He extrapolated this law into virtually all areas of human activities and concluded, for example, that human intelligence is not equally distributed among all persons but that the greatest amout of intelligence is normally found to be concentrated in a small minority of people. Because of this, success and wealth would naturally only accrue to a small minority of any population. From this basic law Pareto went on to formulate a theory of political and sociological elitism which was subsequently used by various European and American economists to explain the concentration of wealth and power in various social settings. What is most interesting for our purposes is Pareto's initial observation, which has formed a foundation for the development of industrial and management control techniques known as quality control system. Every quality control systems is based on Pareto's law.

The Medicaid Quality Control Program is similarly based and is being used by three States to develop error prone profiling systems which are helping these States to reduce dollar losses from ineligible and overpaid recipients. What is the basis for the error prone profiling (EPP) system?

In Medicaid, practically all of the major areas of dollar loss arise from a small percentage of the total number of transactions occuring in the program. Invariably, 85 percent or more of Medicaid program recipients are fully eligible for Medicaid benefits, while 15 percent or less of the remaining recipients account for all of the erroneous expenditures made for all recipients.

The principal capability which an effective error detector and correction system must have is an ability to segregate out this 10 or 15 percent of the total caseload. This is what an error prone profiling system does—by identifying those characteristics of a recipient or case which are associated with ineligibility. With this information it is possible to focus error detection, correction, and prevention efforts on that small portion of cases which exhibits these characteristics. This makes for an optimum use of limited resources. This is the principal benefit of an error prone profiling system.

The next section describes some basic steps for developing an error prone profiling system using the data generated by Quality Control programs. The three systems described are those that have been or are under development in the States of New Hampshire, Texas and West Virginia. The final section of this paper describes the application of the error prone profiling technique in error detection and prevention.

Development of Error Prone Profiles

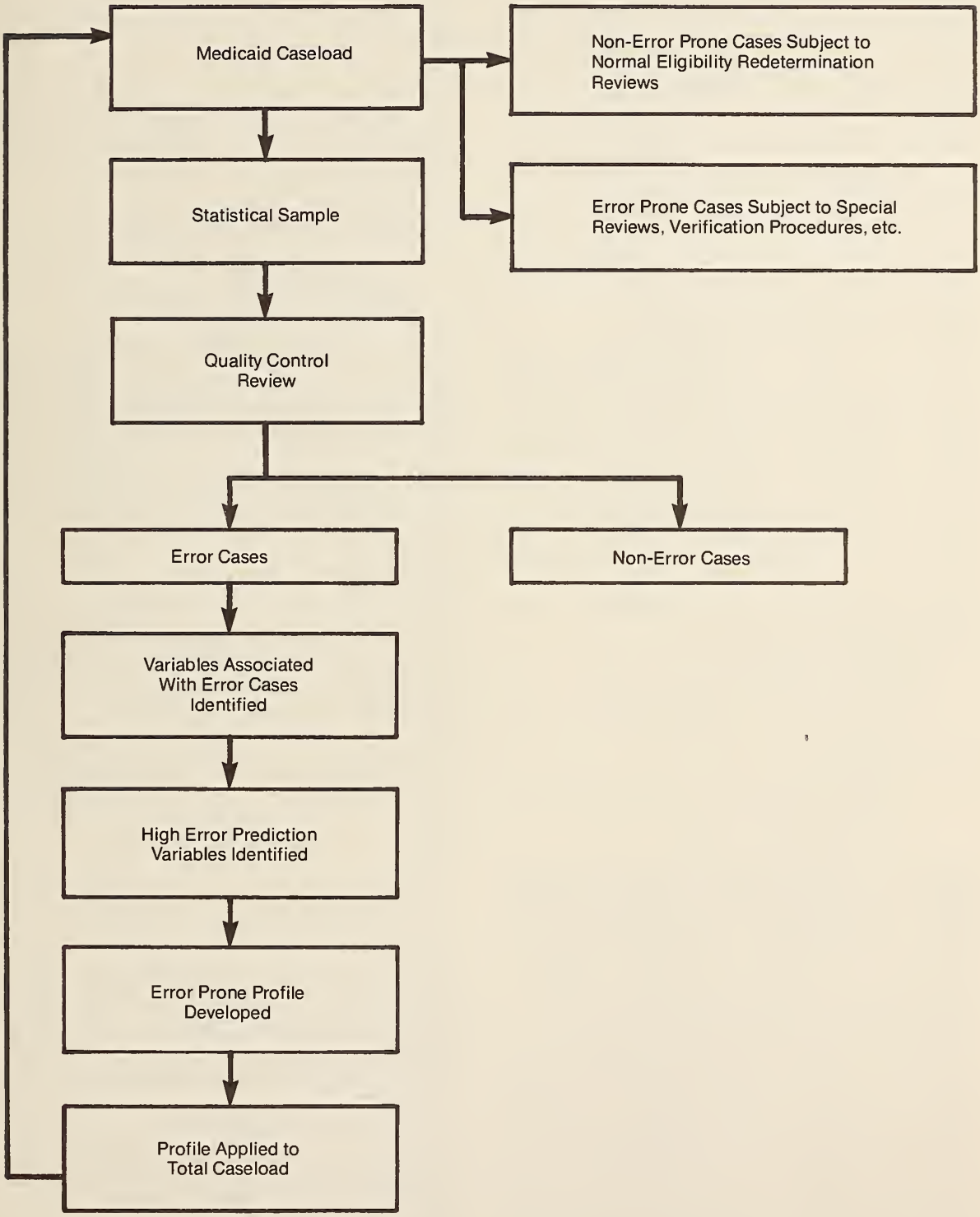
Each of the three error prone profiling systems which will be described below have been developed in a similar manner. Basically an error prone profile is developed through an analysis of quality control data which identify erroneous cases, and the recipient characteristics which are associated with these error cases. Each of the processes through which an error prone profile is developed generates the same end product: a group of cases (which can be projected to the entire caseload) which taken together share certain characteristics, and exhibit an error rate higher than that found in the rest of the QC sample (and, through projection, in the State's total caseload). Once a set of characteristics is associated with a definite probability of error, it becomes clear that cases falling above this probability threshhold represent the group of cases most prone to error; these should be the prime target for corrective action to reduce eligibility and overpayment errors. The chart following this page summarizes the general process used in developing and applying error prone profile systems.

New Hampshire

The State of New Hampshire, with the assistance of an 1115 grant, developed its error prone profiling system as follows: First, Medicaid Quality Control techniques were used to select a stratified probability sample of 758 cases which accurately reflected each district office's Medicaid non-money caseload. The next step was the development of a claims history for each case, which reflected all claims paid on behalf of the recipient for a period of six months prior to the date of selection. The next step was to do a Medicaid Eligibility Quality Control eligibility review on each case. Based upon this analysis, New Hampshire found that of the 758 cases, 177 (or 23%) were cases in which the recipient was either ineligible, in which the spenddown had been incorrectly calculated, or where a third party should have paid expenses. The next step was to array recipient characteristic data into a matrix of 189 variables and apply statistical tests of significance to determine the correlation existing between each of the 189 variables and the cases that were in error. Seventeen variables were highly correlated with error cases. These 17 variables were further analyzed to determine whether combinations of them yielded even higher correlations. In this way each single variable was linked with several other variables to provide multi-variable error profiles.

Each profile may be considered to have two key dimensions, P and Q: P = the probability that any randomly selected case fits the profile; Q = the percentage of cases fitting the profile which have errors. These dimensions allow us to quantify the efficiency of the profile. A perfect profile would select only those cases which

Basic Error Prone Profile Development And Application Process



did, in fact, contain errors and would, therefore, have an upper limit on Q of 1.0 or 100%. Q has a lower limit as well—zero. At Q's lower limit, P = 1.0 minus the overall error rate. Q also equals zero when P = 0. Experience has revealed that a good profile has a relatively low P value, and a high Q. Why? We want the profile to be a *sensitive* detector. The fewer the cases that fit it, the more selective it is—a profile that selected every case would obviously have a low detection sensitivity. P is a measure of this sensitivity. On the other hand, we want to capture all (as the ideal) or at least most, of the cases that in fact have errors. This means a high Q. A low P and high Q which captures all or most of the errors = the most sensitive and efficient detector possible.

The actual profile development process was "stacked" via the Monte Carlo Method—the variables were initially grouped by what seemed intuitively obvious error-prone combinations. Further combinations were all tested on a random basis. This process produced some very good profiles, some very bad ones, and a mediocre majority. The best profiles produced were used in the actual system application.

A series of profiles was developed for each of the following categories:

- Applications only
- Redeterminations only
- Applications and redeterminations combined for:
  - General profile
  - AFDC profile
  - Independent profile
  - Nursing home profile

Since one purpose of the profile was to be able to control the intensity of the initial eligibility or redetermination review, the costs of reviews were analyzed. An intensive review was found to take three persondays; routine reviews were found to take about three hours.

The dollar values of different error cases were then used in conjunction with the probability that a routine review would uncover the error when one is present. This information was used to determine the level of review to which various cases should be subjected, based upon their error prone characteristics and profile value. Profiles were then ranked by cost effectiveness, and cases fitting the most cost effective profile are selected for intensive review at application or redetermination time.

Texas

The Texas error prone profile development effort began with a study of 205 variables. Among them:

Two adults in grant
Frequent changes in the case
Total of client bills greater than grant
Occupational status
Educational level of clients or dependents
Age of client or dependents

Information was collected on each of these variables in a sample of 2,473 cases. The sample was examined using standard Quality Control techniques and it was determined that 485 cases or 20% were in error. Two samples were used: the first to develop a profile and the second to validate the profile. The second sample of 620 cases was examined; 70 cases or 11% were in error.

The actual development of the error prone profile proceeded again through a series of steps. The first step was to statistically analyze the relationship of each of the 205 variables to error cases and non-error cases to see if any statistically significant differences in correlation were evident. Once a set of variables showing statistically significant correlations was isolated, these were further analyzed through a form of "sensitivity analysis" to magnify the degree to which a particular variable was a reliable predictor of an error case. For example, it was found that the age of the recipient had a significant relationship to whether the case was or was not in error. Finding that there was a higher percentage of middle-aged recipients in the error group than non-error group, the State then rescaled this variable to isolate the boundaries of this middle aged group. In this manner critical values for each predictive variable were developed. Through this type of analysis critical threshhold values were found for all variables statistically related to and predictive of error cases. These variables were then entered sequentially into a correlation equation to determine which ones continued to improve the

prediction between error and non-error. The final selection of variables was then largely a judgmental matter, based upon such considerations as the availability of data for each of the high predictive power variables, and the difficulty of collecting such data. Through this process the number of variables used to develop the profile was reduced from over 200 to 30 and to a final set of 14. These 14 variables are used in the error prone profile (EPP) analysis.

The entire caseload is scanned with this technique and EPP scores generated. For the high EPP scored cases, caseworkers in the field are sent alert reports. For example, the following types of messages are sent to workers:

1. Case is newly certified and review 90 days after certification is desirable (not required).
2. Case is newly certified and scored in the top 10% on the Error Prone Profile. (Texas arbitrarily decided on the 10% figure.)
3. Case scored within the top 10% on the profile and is due for a special review.
4. Error prone case for which a special review was not performed in 90 days, and the case is due for 6 month review. The case needs more careful review.

In this way the Texas EPP system interacts directly with first line workers, aiding them in correcting cases which have a high probability of error. Complete cost-effectiveness studies on the Texas EPP system have not been done yet. Hence, there is no final verdict on the effectiveness of the Texas System.

West Virginia

The West Virginia system has the same objective as those in Texas and New Hampshire—i.e., to determine characteristics of a set of cases which have a higher-than-average error rate.

To generate the EPP, West Virginia used a different approach. Briefly, the method is as follows:

1. Calculate the error rate for each set of sample cases and identify predictor variables.
2. Determine which, if any, predictor variables have the most significant association with error rates, using a chi-square test. (The chi-square test is a technique which compares different sets of variables with each other, for example, size of payment versus error/non-error. No associations between variables are assumed; the actual values found are used to set up expected values. If the observed values depart markedly from the expected values, a determination of level of statistical significance can be made).
3. Select those values of the selected predictor variables which have an error rate significantly higher than that of the average error rate for the cases being analyzed.
4. For the selected cases, repeat steps 1-3 until no significant subdivision can be found.
5. Tabulate eligibility factors involved and the causes of errors for the selected cases (error prone group) and print error prone case profile.
6. Repeat steps 1-5 on cases that have not been included in an error prone group until no more error prone groups can be found. Print profile for the cases remaining (the non-error prone group).

As part of this process several important items of information are calculated and considered. They are:

Case Characteristics which define the error prone groups. This information is used to select the error prone cases out of the total caseload.

Error-Prone Items are those elements of information which are most frequently in error for the selected group of cases.

Types of Agency and Client Characteristics associated with each type of error detected profile.

Size of the error prone group in the total caseload.

Probability of error: the chance of error in the error prone group.

Error Prone Index is the ratio of the probability of error in the error prone group divided by the probability of error in the total caseload. This is a relative measure of just how error-prone a given group of cases are, i.e., just how fruitful it is to investigate such cases in the caseload.

Incorrect Payments per month: payments for ineligibles plus overpayments minus underpayments, for the error prone portion of the caseload. This shows the financial impact of the error prone group.

As a result of the foregoing methodology, five basic sets of Error Prone Profiles are generated, each with a different intended effect. The first set of profiles is based on an analysis of errors occuring during the application process, and provides a basis for selective verifications in processing new applications. The second profile is similar to the first, but it concentrates on the redetermination process. The third profile analyzes agency errors. They provide information for the agency to do special reviews for cases in which there is a higher error rate than the normal agency error. The fourth profile is based on client errors (excluding misrepresentation of facts by clients) and provides a basis for selective requests from recipients for information between redeterminations. The fifth set of profiles is based on cases in which there was intentional misrepresentation of facts by clients. These cases are subject to special investigations and referred for prosecution as appropriate.

Before doing a selective review, several factors are considered: the cost of the appropriate review action; the average monthly payment error per case in the error prone group; and the size of the error prone group. These factors are important in deciding whether it is feasible and cost - effective to schedule the implied selective case action.

To provide information to the case worker, computerized lists of cases are generated each month showing case names, numbers, addresses and eligibility elements likely to be erroneous, as well as what type of action to take, e.g., elements to verify, supervisory review, etc.

This covers the cases already on file with the State. For new cases, not yet on the computer file, workers follow a set of instructions to determine which, if any, selective actions are appropriate for each case.

In the Texas system every case is "scored" according to certain characteristics—a decimal value from 0 to 1 is assigned, from which the State decides just which cases to review. In New Hampshire and West Virginia, all those cases meeting a profile of selected characteristics are reviewed.

Even though these systems are quite different, each uses multi-variate profiles, i.e., profiles which are based on more than one variable, taking cognizance of the interrelationships of variables. The Texas project uses State file information, QC data variables, plus a one page addendum to "capture" additional information, while the West Virginia system restricts itself to QC data and data in its master file because of the extra cost involved in getting additional data.

To summarize, the major features of the three EPP systems are:

- All three systems direct agency attention to cases which have a higher error rate than the average case.
- All three systems instruct workers to perform more intensive or more frequent reviews to verify circumstances of the case and also specify what elements of eligibility need special attention.
- All three systems rely on Quality Control data as the basis for developing and updating the EPP.

For further information on error prone profiling systems, contact the Institute for Medicaid Management.

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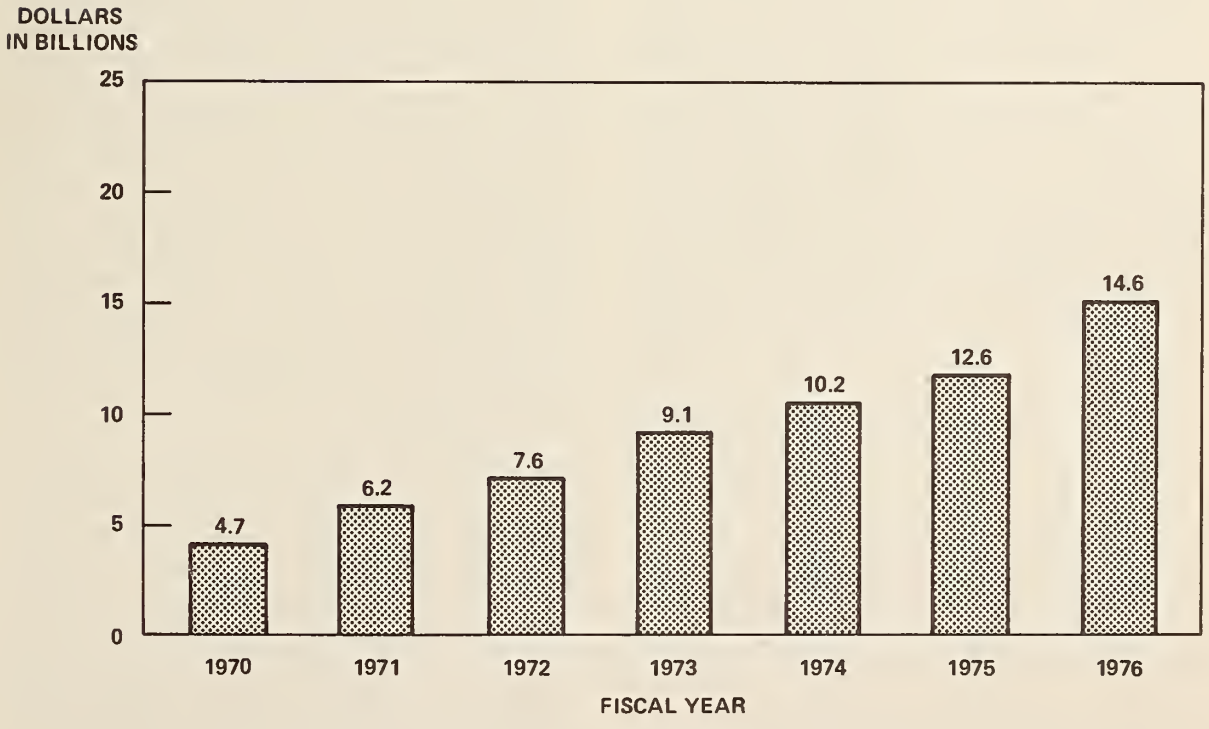
GROWTH IN MEDICAID EXPENDITURES

FISCAL YEARS 1970-1976



SOURCE: NCSS

HCFA/MSA/DPM

TURNAROUND DOCUMENTS IN EPSDT CLIENT TRACKING: THE SOUTH CAROLINA 1115 PROJECT

by JAMES JOLLIE

EDITOR's NOTE: Managers of the Early and Periodic Screening, Diagnosis, and Treatment Program (EPSDT) (mandated in Section 1905(a) (4) (B) of the Social Security Act) are well aware that its preventive orientation makes management demands that are unique within Medicaid. With the exception of family planning services, all other aspects of the program are aimed at treatment of acute, or amelioration of chronic, conditions.

EPSDT, however, is based on another model of health care, which is to a large degree peculiar to pediatric medicine but which has many implications for national health insurance.

This orientation is almost wholly preventive—it is assumed that if a child can be steered through the usual health hazards of childhood, and receive adequate medical evaluation and necessary treatment in adolescence, the child will grow into a healthy adult in whom chronic debilitating conditions or severe acute ailments are unlikely. While there are obvious medical and humanitarian grounds for the program, there is also a measure of economic rationality. A child who *receives intensive services* under Medicaid when needed is *less* likely to be an adult who *requires* those services. And, the reasoning further has it, that the child will in fact be less likely even to be Medicaid-eligible because of economic handicaps that can be traced to medical problems.

This orientation is strengthened by the general tenor of pediatric practice, which aims at early correction of conditions which may not be treatable when the child has become an adult.

Owing to the catastrophic decline in the proportion of children immunized that has been observed since the mid-60's, full implementation of EPSDT becomes a public health measure. The ideal is that every child be immunized against every disease for which an effective vaccine exists. Because of the way disease spreads, however, that ideal can be approached when a high *percentage* of children are immunized. Disease requires a minimum population to spread itself; lacking that, many children are protected by the fact that the disease never spreads far enough to reach them.

One would think that the obviousness and measureability of EPSDT's goals would make management of the program relatively easier than that of other portions of Medicaid. It has quickly been discovered, however, that the program is subject to delays, bottlenecks, and difficulties in implementation and compliance. A rather elementary capacity, that of being able to ensure that children are screened, and that once screened, problems detected are treated, turns out to be a way of removing many roadblocks.

This paper describes, in a highly summarized form, the South Carolina 1115 Project in EPSDT management. It is based on a very simple concept — the use of a turnaround document as a means of tracking eligibles, and the derivation of management data from the tracking process.

The project's initial assumption was that most of the necessary information for effective program management was already somewhere in the State's data system. Thus, the strategy pursued was not the installation of a completely new system, but classification of the available data and determination of the best way to use it in managing the program. There were two objectives: the first was to develop a system that would effectively track recipients; the second was to use the data generated in that process to keep constant watch over the operation of the program.

Some limited modifications were required in the State's system. However, potential headaches were turned into opportunities for tailoring the system modifications to the needs of the user. From the start it was assumed that any new output should be produced, and the changes needed to produce it made, only if a clear administrative need could be demonstrated. Thus, changes were tailored to the demands of the administrative staff, who were continuously consulted during the design phase.

The South Carolina EPSDT Program

The State program is operated by the Medical Assistance Division of the Department of Social Services (DSS), which subcontracts the operation of the EPSDT program to the State Department of Health and Environmental Control. The Department of Social Services runs the EPSDT data system.

Each county is assigned a quota of eligibles to be screened each year. An assessment must be provided once every third year as long as eligibility continues. Each screening is reimbursed by the State at a flat rate, with add-ons for elective diagnostic or treatment procedures.

As it existed prior to the 1115 project, the South Carolina EPSDT data system allowed for the identification of eligibles, notification for screening, and scheduling of an initial screening at one of 115 local public health clinics. As modified, the system now allows for the tracking of each eligible through completion of a treatment program (if needed) and the production of a number of reports.

The central strategy is the use of a single six-part form which accompanies the recipient from notification through treatment. Upon confirmation of eligibility, the form is printed and sent to a county DSS office, where an appointment is made for the client to be screened. Problems noted at screening are indicated on the form, and a referral to a provider is made.

The system as presently structured produces a new form for each eligible not screened within the past three years, for all those requiring a screening in the current month according to schedules established at a prior screening, for all those with more than one treatable condition, and produces a summary report of all forms issued.

The form's top portion contains a space for a narrative of all medical problems detected. Originally, to satisfy Federal reporting requirements for form NCSS-120, the problems detected were sorted into one of six categories, the sixth being "other". This made it impossible for the DSS to keep track of which "other" problems had been treated, and made profiles of screening activity almost useless, even though Federal reporting requirements were satisfied. In the new system, an expanded two-digit code is used which allows for the full identification and tracking of each problem detected.

Once the notion of the use of a "turnaround" tracking form as both the output and input document had been conceived, the only other difficulty, a purely technical one, was the merger of the existing data files so as to make all needed information available to the new EPSDT system. Since all data were held within the DSS' main computer system, this was relatively painless.

The success potential of the turnaround document concept is at once apparent — the system will not close out, or mark as dormant, a case until it receives notice, *via* information from a returned form, that the child has been screened, the treatment given, and any necessary follow-ups made. Only then is the coding done that schedules a future screening.

Documentation for Program Management

The use of the form as a tracking device is simple. However, the monitoring of the program and use of the tracking system are problems for State managers. To aid management decisions and program planning, the system produces 9 management reports:

(1) *Report of Forms Printed:* This report serves as the basis for all manual review of tracking. Hence, it is crucial for system monitoring.

(2) *Report of Additional Forms Printed:* To allow for full tracking of all treatments, any condition discovered on the initial screening is added to data already available on the client. For more than one condition, an additional form is produced for each condition detected. This allows for a varying schedule of treatments, and a constant updating of records of treatment received.

(3) *EPSDT Screening Statement:* This provides a complete listing of all services delivered to each client by service code and allows for the identification of conditions, treatments received, and costs. A summary listing provides totals for all screens, treatments, and costs.

(4) *Diagnosis and Treatment Reports:* This report lists monthly diagnoses and treatments by client. It also includes analytical data such as number of visits/diagnosis and cost/visit. Organization is by diagnosis, and a complete picture is given of the incidence of each diagnosis and the treatments provided. A total is included for all treatments, by month, by county.

(5) *Cost Analysis Report:* Costs for screening, further diagnoses and treatment procedures are indicated by diagnosis in summary form. Average cost per patient by diagnosis and percent of total program costs per diagnosis are indicated.

(6) *EPSDT Status Report:* This is a summary of screenings, referrals, diagnoses, treatments, and close of treatments aggregated on monthly, quarter-to-date, and year-to-date basis.

(7) *Patient Status Report:* This is a listing of all patients who have passed through the full cycle and have completed treatment for conditions detected on the current screening. Listings are given by county; this list thus provides a measure of county peformance in meeting program objectives.

(8) *Screening Forms Outstanding:* A list of all screening forms outstanding for more than 45 days. A similar report is produced for all forms outstanding for 90 days.

(9) *Schedule vs. Capacity Report:* This is the only report that requires data not currently stored. Information is obtained from several sources regarding the capacity of the State's physician community to perform screening and provide services. This is then weighed against the actual program resources in use, and gives an indication of the need for stepped-up provider recruitment, etc.

Additional reports are produced as needed. Of particular interest are the false positive/false negative reports, an indication of the efficacy of screening. Copies of the South Carolina form may be obtained by contacting the Institute for Medicaid Management.

James Jollie is Director of the EPSDT program in South Carolina. He has had extensive experience in State and local government administration and has served as Director of the program for the last four and one-half years.

PROVIDER INVOLVEMENT IN MICHIGAN MEDICAID

by ROBERT C. BONHAG, D.M.D., M.H.A.
JOHN K. NEIDOW

State Medicaid programs are in a real dilemma. On one hand they are asking for greater provider participation while, at the same time, they are telling providers it will be more difficult to get paid for the care they render to Medicaid patients, and that they will face increasing public scrutiny for that care.

The basic tenet of the Medicaid Program is to provide, to each Medicaid recipient, medical care comparable to that of the general population, by having the State Program pay for that care. With the recent emphasis on provider fraud and abuse, pre-payment editing has increased. This editing may reduce or delay some payments to providers. Additionally, because of State budget restraints, fee schedules are often not comparable between Medicaid and other payment sources. The potential bottom line is a reduction in the number of enrolled providers, because many are unwilling to tolerate the conditions outlined above. Many of the providers who continue to treat Medicaid patients are willing to accept the public accountability, delayed payments, reduced fee screens, additional paperwork, etc., because they are socially conscious. However, some are simply making money as a result of increasing their volume of Medicaid business as other providers drop out, and are not necessarily the ones we want nor need in the Medicaid Program.

Is there an answer to this dilemma? We, in Michigan, strongly feel that the only way to maintain a quality Medicaid Program is through provider education and provider involvement in policy formulation. We have tested this alternative and found that it works. Policy formulation recommendations are mandated in the Medical Care Advisory Committee forum, and each Medicaid program has already established provider education and involvement components. We, however, have taken this approach further and this article attempts to demonstrate our strong belief in this approach and our success with it.

Background

The Michigan Medicaid Program, like many Medicaid Programs, represents the single largest State program in the State of Michigan. As such, it represents 17% of the total State budget and 15% of all health expenditures in the State. Since the beginning of the Michigan Medicaid Program in 1966, our grant expenditures have grown enormously from $67 million to the 1977 Fiscal Year projected grant expenditures of $935 million. We presently have 28,000 enrolled providers in the Michigan Program, sending us an average of 65,000 invoices per day. Ten percent of the Michigan population is enrolled as eligible in the Medicaid Program.

When the Michigan Program was initiated, Blue Cross and Blue Shield of Michigan was the fiscal agent for the State. However, for various reasons (mainly of economy and control) the State became its own fiscal agent in 1972. The conversion to a State operation called for careful planning, which provided the State Program an opportunity to involve the provider community in the development and implementation of the Medicaid system.

From the very beginning, the State of Michigan involved the provider community in an implementation schedule which was designed to incrementally bring providers on the new system, with their cooperation, so that problems unforseen during the test period could be quickly resolved. Because of the large number of invoices which the State expected to receive

from providers, the State, in concert with the provider community decided to use optical character recognition equipment to assure fast, accurate payment to individual providers. A new invoice format, which would be optically scanned, was developed with the cooperation of provider groups, the management consultant team, and the State.

To assist in the implementation of the Medicaid system throughout the State, comprehensive provider manuals, containing a general description of the Program, recipient eligibility, coverages, limitations, billing, inquiry information, and miscellaneous information regarding the Program, were furnished to each provider enrolled in the Program. In addition to this, detailed, day-long orientation and educational seminars were conducted at various locations through Michigan. Our comprehensive provider manuals and seminars are specific to provider type, i.e., a pharmacy provider has a different manual and seminar than a hospital provider.

In order to complement the more formal seminars and manuals, two additional services are offered to assist in the conversion and ongoing education and involvement of the provider community. These services were the toll free telephone line, which is available for individual provider problem solving, and a field representative service, which actually visits on-site with a particular provider when he has a problem that cannot be solved over the toll free telephone.

In summary, the background of the State's administration of the Michigan Medicaid Program has been directed toward full involvement of providers in Program planning and implementation and, in the area of provider education, in the daily administration of the Program. We provide Table I as evidence of the success of this approach. It is interesting to note that provider participation has actually increased faster than the provider population increase. While it is impossible to draw a conclusion that there is a direct cause-effect relationship between the intensive provider education and involvement in the Program and the increased provider participation, the evidence certainly indicates a strong correlation.

TABLE I

	Program Expenditures	# of Unduplicated Providers	Fiscal Agent
1966/67*	66,809,910	N/A	BC
1967/68	150,301,890	N/A	BC
1968/69	188,691,994	13,000	BC
1969/70	211,817,871	N/A	BC
1970/71	270,223,828	N/A	BC
1971/72	333,606,435	13,000	BC
1972/73	419,411,512	18,000	State
1973/74	504,261,867	21,000	State
1974/75	615,883,773	23,500	State
1975/76	698,061,613	27,000	State
1976/77	810,829,939	28,000	State
1977/78	935,000,000	N/A	State

*9 Months

Recent Developments

Consistent with the recent reorganization of the Bureau of Medical Assistance, the areas of provider education and provider involvement in policy formulation have been further enhanced. While the areas outlined above (that were absolutely essential to the smooth transition to the State-run Medicaid Program) are still in effect, they have been developed further and have become more effective. This is consistent with the evolutionary style in the administration of Medicaid Programs.

Within the last year, providers have been included in major policy formulation, and as a consequence of the first major efforts in this area, the Program successfully implemented cost containment efforts, supported by the provider community, which resulted in a $30 million cost saving in Fiscal Year 1976-77.

It is helpful to review the strategy and planning that went into the cost containment effort and what has subsequently been put into place

with policy development throughout the Bureau. The process began some two to three months prior to the beginning of the 1976-77 Fiscal Year. At that time projections indicated that we would exceed our budget. Therefore, the Bureau of Medical Assistance designed an approach which would involve all of the providers in a group setting, with the Governor making a special plea to all providers to cooperate with the Bureau of Medical Assistance in developing a cost containment plan. The plan was to maintain services where possible, and confine reductions to areas felt to have the least impact on our recipient population. As might be imagined, this mission was a difficult one. However, because all providers were involved in the initial charge to this work group, the issues were immediately addressed. Previous to the 1976-77 effort, the Department had implemented one cost containment effort after another - each impacting only one provider group. In this year's effort, all provider associations were involved in reviewing the cost containment efforts so that a general consensus was reached on the direction of the plan. It should be noted that not all provider associations agreed with all cost containment efforts. Rather, for those members of the provider community who were involved in the process, all agreed that the cost containment efforts, which were recommended to the legislature, had to be done. The initial charge to the work group (not to have service cutbacks) was accomplished through the compromised and consensus mechanism of involving the providers in the process.

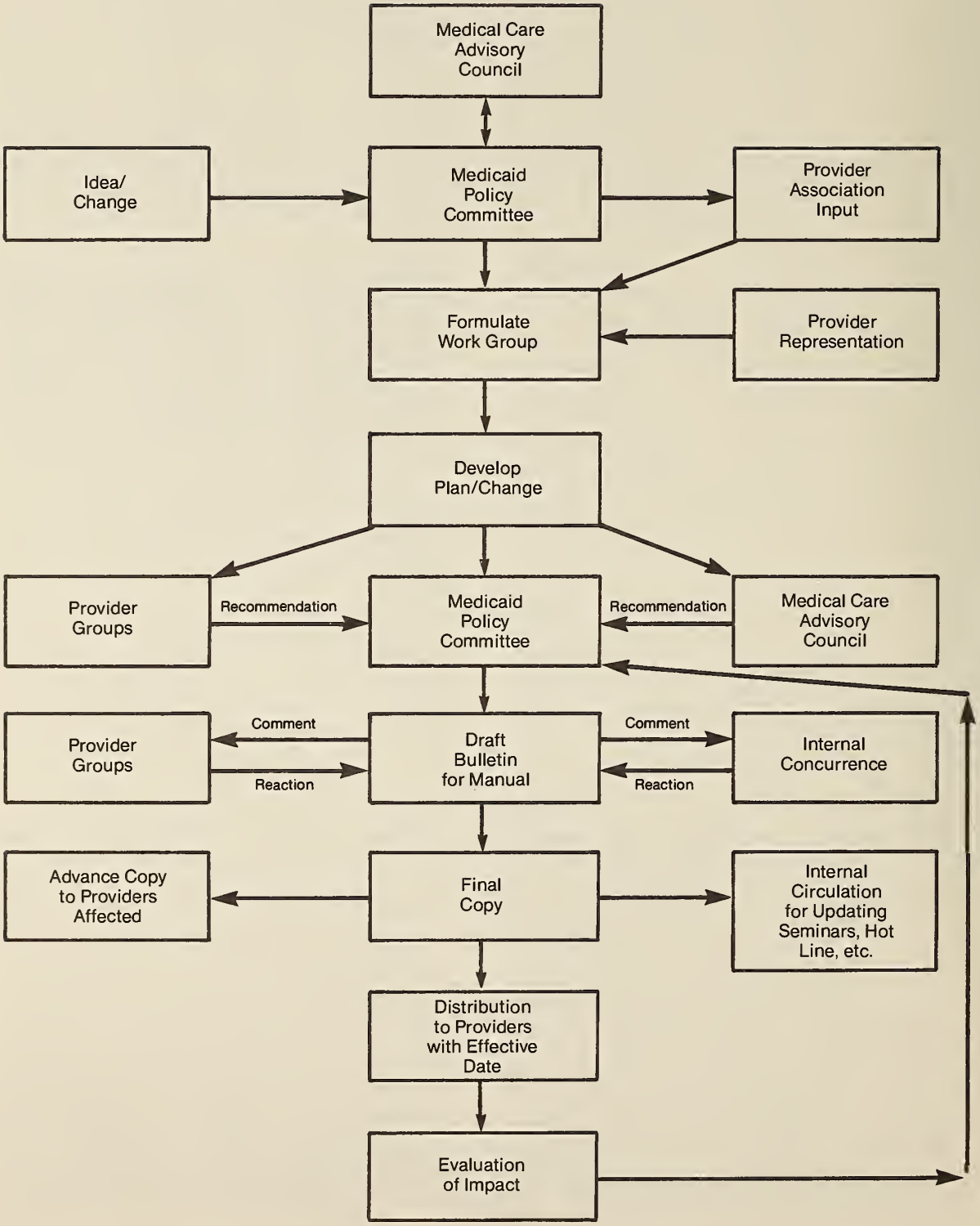
Building upon the success of the provider involvement in the cost containment proposals, the Bureau moved to establish formal quarterly meetings with all provider associations. These meetings had gone on for some time with several of the provider groups. However, these meetings were formalized and a calendar is now developed every year for all of the quarterly meetings of each provider association. There are many reasons for formalizing the process, but the main reasons are to assure the Program and the provider community an opportunity for interchange of ideas, to provide a management overview of policy formulation which is requested either by the program or by the provider community, and to establish work groups for policy formulation and recommendations. We have had many successes in the area of provider participation in the policy formulation phase.

Chart I provides an overview of the process of policy formulation within the Bureau. It is essential to involve the providers early in the process when a change appears to be necessary. While there are several reasons for doing this, the basic reason is that our providers feel the Michigan Medicaid Program is their Program and they are deeply involved in it. We have had several examples of the use of this policy development process as outlined in Chart I.

One good example is the complete revamping of all of the pathology codes in use in the State of Michigan. It should be indicated that we use a uniform procedure code for Medicaid, Blue Cross and Blue Shield of Michigan, and other commercial insurance carriers. This uniform procedure code was cooperatively developed by the practitioners. Blue Cross/Blue Shield, and the Medicaid Program. Additionally, we utilize a uniform claim form for all practitioner services within the State of Michigan for Medicaid, Blue Cross/Blue Shield, and the insurance carriers.

When the uniform procedure code was developed, the area of pathology codes was done in a rather cursory manner. After one year's experience with the codes, it was determined that it was time to revise and recodify the pathology codes. This was accomplished by the Bureau of Medical Assistance establishing a project team consisting of members of Blue Cross/Blue Shield, the Michigan State Medical Society, the Michigan Association of Osteopathic Physicians and Surgeons, the Michigan Department of Public Health, the Michigan Association of Independent Laboratories, and the Medicaid people. The end result is a well defined pathology section which is wholeheartedly endorsed by the professional societies and by the third party payors. In essence, the practitioner and laboratory professionals provided technical expertise which would not otherwise be available to program managers directly. This assistance was provided at absolutely no charge to the program and provided a product which was both useable and a cost saving tool.

Chart I


Medical Care Advisory Council
Idea/ Change
Medicaid Policy Committee
Provider Association Input
Formulate Work Group
Provider Representation
Develop Plan/Change
Provider Groups
Recommendation
Medicaid Policy Committee
Recommendation
Medical Care Advisory Council
Provider Groups
Comment
Reaction
Draft Bulletin for Manual
Comment
Reaction
Internal Concurrence
Advance Copy to Providers Affected
Final Copy
Internal Circulation for Updating Seminars, Hot Line, etc.
Distribution to Providers with Effective Date
Evaluation of Impact

In recodifying the pathology codes, the Chart I flow was utilized. The concept was brought forward and a work group was established. This work group reported back to the individual provider associations and to the Bureau as progress was being made. The final procedure code was reviewed and accepted by third party payors and will be shortly published in the uniform procedure code manual. All the way through the process, the providers were deeply involved in the project and, as such, reported to their quarterly meetings the progress and obstacles to be overcome in the process. Therefore, from the Medicaid administration point of view, many of the previous problems with policy development were overcome.

As mentioned above, approximately one year ago, the Bureau of Medical Assistance was reorganized and the concepts of provider education and policy development were initiated. In the policy area a new unit was established. It was called the Medicaid Planning Division. Within that Division the policy development process was detailed and developed. The Medicaid Planning Division is responsible for providing the lead analyst for each work group which is constituted for a specific policy development. Thus, they have resident experts in various areas and are aligned by provider type.

We also formed another new division, the Medicaid Information Division, to take primary responsibility for improving communications with the public and providers. Consistent with this general mission, this Division is responsible for the monthly Medicaid Management Information System (MMIS) working seminars for other States interested in learning about the Michigan MMIS system. The Medicaid Information Division has formalized this seminar and provides it on the first Monday and Tuesday of each month so that information requests can be dealt with in a timely manner and in a formal process.

The other areas of provider education are included as a component of the mission of the Medicaid Information Division. The Division is responsible for the ongoing efforts in our provider manuals, hot lines (toll free telephone lines), provider enrollment, correspondence unit, claims inquiry research (to investigate individual provider billing problems), and field services. MID maintains a central correspondence file for all providers who are enrolled in the Michigan Medicaid Program and is also responsible for provider manual updates, bulletins and other information for effective program participation. Additionally, each hot line request is analyzed by Division personnel and an appropriate response is given, either by phone or in writing, to the requestor. Our hot lines are currently responding to an average of 2100 calls per week on 6 WATS telephone lines. The hot line serves as a quick mechanism to identify problems or discrepancies within the Michigan MMIS system.

A claims inquiry and research service is available so that individual providers can request special analysis to determine billing or data preparation problems that they may be experiencing which result in a cash flow or accounts receivable problem. This capability allows the Medicaid Program to identify specific problems which a provider may have or which our system is creating. If it is a systems problem, we can immediately go to work to correct it. If it is a problem that a provider is creating for himself, a field service team member may be required to provide additional education to the billing personnel of the particular provider. Additionally, we ask providers and their billing clerks to attend our Seminars which are given through the State at various time intervals. We have found, through past experience, that the key to the Michigan Medicaid system has been the good training and continual training of the provider billing clerk. The billing clerk becomes the provider's key into the system and if that key works well the provider receives quick payment on his invoices. For instance, 92% of all of the invoices received are paid within 15 days. The Michigan Medicaid Program can only have such a record because the provider billing clerk is properly educated and properly informed as to how to bill and submit invoices to the Michigan system.

The Medicaid Information Division also works to provide pamphlets and other information to the recipients of the Medicaid program. The Medical Care Advisory Committee has been instrumental in developing several cost containment messages for the recipients of this program. Through MID, these messages and comments have been distributed with the medi-

cal assistance identification cards which serve as an authorization to obtain Medicaid services.

Summary

The Michigan Medicaid Program has developed as well as it has over the years through the active involvement of the provider of medical services in the State of Michigan. During the past year, enhancements have been made in the provider involvement area in not only the education component but also the policy formulation phases. The experience to date has been excellent and one that enforces our general directions. The Michigan Medicaid Program has an active education component but also policy involvement for both providers and recipients. The provider education is multifold: formalized provider association meetings, formal provider education Seminars (for providers and billing clerks); a telephone hot line service; a field representative service; a claims inquiry and research function; a correspondence function; and comprehensive provider bulletin and manual service. No effort, by itself, takes care of all of the educational requirements. Only through a balanced approach, utilizing all of the above listed functions, have we been successful in educating providers and their clerks to properly use our system and to identify particular problems. As an interesting side note, H. R. 3 will provide 90% matching in the future for many of these functions as an encouragement to all States.

It is important, as we look forward to the day when National Health Insurance is a reality, that we realize more money alone will not be the answer to "insuring the national health." We will need to include provider expertise and consumer involvement as we evolve a system which will be designed to provide health education and preventive services, and only when that fails, to provide medical care in the proper setting, by the appropriate person, and in the correct amount, for the correct duration. This evolutionary process needs professional guidance and citizen support. It needs the impact of providers, recipients, planners, and researchers to be effective. For this to happen, the two essential elements are provider and recipient education and provider and recipient involvement in policy formulation. In Michigan, we have involved the providers heavily in policy formulation and they are effective in this formulation only because they have also been educated in our system.

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AUTOMATED REVIEW OF MEDICAL PRACTICE IN THE MEDICAID PROGRAM: BENEFITS FOR PROVIDERS

by CHARLES MACKAY, M.A.

While assisting providers was not the primary motivation that led the Medicaid Bureau (MMB) to promote automated review originally, and the system used was designed with several different goals in mind, automated review[1] of professional practices in the Medicaid program can be used to assist physicians, dentists, and other providers. Understanding the possibilities for provider-oriented use of practice reviews requires both a grasp of the process used, and the circumstances that led MMB to promote such reviews.

Background

The Federal and State governments, having undertaken to provide medical care to the needy, cannot abandon the effort. On this point, nearly everyone agrees. Termination or significant reduction of benefits by any of the 53 States or territories involved has become a political and social impossibility.

Even if the Medicaid program is eventually absorbed by National Health Insurance, the need to provide essentially free medical services to a large population (22.9 million in fiscal 1976, or about 10% of the American people) remains.

Public opinion surrounding "welfare" matters has shifted during the last ten years. Recipients have come to view assistance as a right. Courts have, on the whole, supported the view that once rationally set eligibility criteria are met, public assistance *is* a right. At the same time, the cry that "welfare" must be "earned" in some way or another has been heard more and more frequently.

One can argue that the public acceptance welfare programs enjoyed in the 1960s was *not* based on a public mood indefinitely more liberal then, but on the perception that the programs were "sold" as *self-amortizing*. Poverty was to be wiped out and the need for welfare thereby removed. If the public's current attitude to "welfare" is viewed as one of disillusionment, rather than revulsion, much of the dislike of "welfare" makes sense.

We are left now with an observable antipathy towards such programs as Medicaid, and poverty subsidized, rather than eliminated. Despite these disappointments, however, such programs as Medicaid have made the lives of the poor better. Thus, the program's continued viability in a time of disillusionment: abandoning it would mean a drastic cut in already minimal living standards of a sizable portion of the population.

Against this backdrop, the Medicaid program and the physicians and others practicing within

[1] "Automated Review" encompasses a technique called "profiling", in which analyses of the practice patterns of providers in the Medicaid program are produced as a means of quality and cost control. The use of profiles is required by 45 Code of Federal Regulations, 250.18(a)(1)(ii). There are a number of computer systems for carrying out profiling; the Surveillance and Utilization Review System of the Medicaid Bureau sponsored MMIS is used for illustration here as it is the most sophisticated design currently in use, and is the only system certified for 90% Federal matching for development and installation under Section 235 of P.L. 92-603.

it are operating in an atmosphere vastly different from that with which it began. This changed atmosphere manifests itself in two interesecting and reinforcing demands: one, from recipients and some members of Congress, for accountability to the *consumers* of publicly funded medical care; the other, from the public at large, for fiscal and "social" accountability.

Program Data, Program Demands

Medicaid costs jumped from $1.7 billion in fiscal 1966 to $14.6 billion in fiscal 1976. This amounts to an average annual growth rate of about 24% per year (a compounded growth of 759% over the life of the program). Much of this increase was due to the almost unplumbed depths of medical need existing among the poor; but all of the increase cannot be explained by this.

By comparison, from 1969-1976, the total number of recipients increased only 75%, and the consumer price index for medical care items rose only 63%[2]. Excluding the "start-up" costs still leaves a 236% increase in total program costs, over 1969-76, with an average annual growth rate of 19%.

This increase forces all concerned with medical care for the poor to face a rather grim choice: gain control of costs, or greatly reduce benefits. (This is by no means a doomsday prediction: it was presented in just this form during a Senate hearing in 1976[3].)

The other aspect of the public demand on the Medicaid program is "social accountability". Although the political dimensions of this problem are still evolving, the public wants assurance that no tax dollar is wasted, that tax funds go for efficient, quality care for the poor actually in need of it.

Here, the pressure necessarily passes from the program officials to the physicians and other providers. Some providers have committed gross, and in some cases criminal abuses of the program and those it seeks to serve. Although the number of physicians and others involved appears to be encouragingly small, it is estimated that, nationwide, fraud and program abuse constitute 6.4% of the total claims volume. (In cost terms, this means about $934 million of total program costs in FY 1976 represented clear misuse of State and Federal funds.)

In this light, it is understandable why the elimination of fraud, abuse, and poor quality care has become a priority item for the new Administration.

Automated Practice Review

Contemporary information processing technology allows program managers to meet the demands for fiscal and social accountability in a way that can actually be of service to the physician community. The Federal government, through the Medicaid Bureau, sponsors a computer system designed to handle all claims processing and payment tasks in State Medicaid programs, *and* to provide all normally necessary management information. This system has the advantage of identifying the aberrant practitioner without harassing the majority.

Although there are a number of subsystems which are designed to perform various tasks, the one that should be of particular interest to physicians is the Surveillance and Utilization Review Subsystem (S/URS). It is designed to provide an ongoing statistical analysis of the practice of *each* physician participating in the Medicaid program in a particular State. Information for this analysis is derived from the record of claims which the physician has submitted over a 15-month (or shorter) period. Clearly, S/URS cannot provide a picture of *all* aspects of a practice. It does not measure "bedside manner". What it can do is subject

[2]All data used in calculations for this article are from *Data on the Medicaid Program: Elgibility, Services, Expenditures Fiscal Years 1966-77*, (Staff, Committee on Interstate and Foreign Commerce, Subcommittee on Health and the Environment, Washington, D.C. (Committee Print 95-10; available from the Superintendent of Documents, US GPO, Washington, D.C. 20402)), with the exception of total expenditures and total recipients figures for 1976, which are from *Medicaid Management Report, Annual Report, FY 1976* (MMB/HCFA/DHEW, Washington, D.C. 20201).

[3]Medicare-Medicaid Administrative and Reimbursement Reform, Senate Finance Committee, Subcommittee on Health, July 26, 1976; hearing report, p. 1.

the physician's patterns of treatment to a statistical analysis more pains-taking than any which the individual practitioner could provide on his or her own.

S/URS was designed with the understanding that, even when furnished with an exact diagnosis and relevant personal characteristics of the patient, no computer could possibly assess whether an ideal course of treatment was followed, or whether it was adequate.

The norms utilized in S/URS are simple: the Medicaid practitioner's practices are compared to the *practices of his peers* in the same speciality and geographic area. The norm the computer employs is thus not only "fair", but also dynamic: as patterns of practice change in response to growing population, new standards and new technologies, S/URS can follow, automatically readjusting its standards with each new claim paid.

To accomplish this, the State Surveillance and Utilization Review unit selects a certain number of data items essential to, or useful in, the analysis of medical practice. (In States with the most elaborate systems, this can be up to 200 items *per computer run.*) The item "injections per office visit", for example, is defined in the system as "total injections billed for time period T, divided by total office visits billed for the same period." The average value for the selected items is calculated based on the file of all claims paid. This allows the calculation of norms for each group of practices in the State; subgroups selected for analysis may be all neurologists, internists in urban areas, or general practitioners in rural areas, etc.

Each physician's pattern of practice (as revealed by claims submitted by him or her and paid within the past 15 months) is then compared against the average pattern.

By *statistical* methods carried out in the computer, S/URS selects for human review only those providers whose patterns of practice are *significantly* different from the typical group pattern, on a *statistical* basis. The process involves some subtleties beyond this; in particular, deciding which subgroup of physicians a particular practitioner should be compared with is often difficult. The essentials of the method however, are simple. As with all computerized processing, the task could be carried out with pencil and paper; S/URS relieves the tedium and shortens the task.

The S/URS process meets both recipient and public demands by selecting for human review the practice profiles of all physicians who, based on statistical analysis, *may* be creating anomalies, medical or financial, in the program. By analyzing *both* the financial and treatment aspects of each practice under Medicaid, S/URS allows program managers to address *both* cost and quality-of-care issues. (An identical process is carried on for recipients: the "norm" here is the typical pattern of services *received* by patients in apposite subgroups.)

In the review of practice profiles, a typical State agency will first subject them to lay review, with the purpose of discovering any explainable statistical anomalies, not related to medical practice, which may have caused the system to erroneously select the physician for review. Profiles not eliminated at this level are reviewed by medical personnel; only then is the physician contacted in an attempt to explain the anomaly detected by the system. Most questions raised by review are resolved at the informal level. For example, if the questionable item alerted by the computer is the ratio of injections to recipients, the fact that the physician has recently been treating a large number of patients with diagnoses requiring injectable antibiotics resolves it. On the other hand, this informal step may reveal that the practitioner has engaged in questionable professional practices, which may require referral to the local medical society or Professional Standards Review Organization. Or, evidence may be uncovered which raised the question of violations which should be referred to the State Attorney General for further investigation and possible prosecution.

The image presented so far may be that of a "Big Brother" waiting to pounce on the unwary who deviate by the smallest amount from some bureaucrat's norms. This is not the case. The norm against which a practice is compared is the practice of peers in a relevant subgroup. Further, as stated, the norm is dynamic - updated to keep pace with change; and the statistical tests employed are designed to *exclude* small viariations likely to be due to patient-pool differences, geographic locale, etc. The tables which follow give a highly simplified example

Representative Physician Exception Experience: Urban General Practice Common Report Items[1,2]

I. % INITIAL OFFICE VISITS	ARKANSAS	MICHIGAN[4]	MINNESOTA	OHIO
Average	34.71	N/A[5]	21.21	18.36
Standard Deviation	34.20	N/A	26.65	22.97
Exception Control Limit (Upper)	103.11[3]	92	74.51[3]	64.30[3]
No. of Exceptions	0	13	1	6
No. of Providers	395	1065	1124	1806
% Providers with Exceptions in this Category	0.00%	1.22%	0.09%	0.33%
II. MAX. NO. OFFICE VISITS/1 DAY				
Average	N/A	12.33	3.74	5.37
Standard Deviation	N/A	36.35	2.84	10.22
Exception Control Limit (Upper)	N/A	40	15	46
No. of Exceptions	N/A	24	9	16
No. of Providers	395	1065	1124	1806
% Providers with Exceptions in this Category	N/A	2.25%	0.80%	0.89%
III. RATIO DIAG. RAD/ALL PATIENTS				
Average	0.22	0.11	0.27	0.24
Standard Deviation	0.24	0.25	0.79	0.38
Exception Control Limit (Upper)	0.70[3]	1.00	1.85[3]	1.00[3]
No. of Exceptions	1	7	3	2
No. of Providers	395	1065	1124	1806
% Providers with Exceptions in this Category	0.25%	0.66%	0.27%	0.12%
IV. LTC VISITS/LTCF PATIENT				
Average	1.83	N/A	7.51	3.38
Standard Deviation	2.90	N/A	10.34	4.23
Exception Control Limit (Upper)	7.63[3]	3.00	28.19[3]	11.84[3]
No. of Exceptions	1	7	3	0
No. of Providers	395	1065	1124	1806
% Providers with Exceptions in this Category	0.25%	0.65%	0.26%	0.00%

[1]Data resulting from one exception processing in a class grouping in one quarter of 1976.

[2]Only report items selected for exception processing by at least two States in at least one quarter of 1976 are shown.

[3]Exception Limit = Avg. + 2 standard deviations

[4]For Michigan, Urban General Practice = General Practice in Detroit Metropolitan area.

[5]Data not available.

of the results that may be obtained when S/URS analyzes the practices of an entire physician population in a State. It is worth noteing that for most items, *2% or less* of the State's Medicaid physicians were selected for *office* review; of these, only a few would have abberations significant enough to require field contact. Charts I-IV illustrate the results of exception processing for four typical items in four States. It is noteworthy that the largest percentage of reports generated is 2.25%, on the item "maximum office visits in one day".

The positive effects SUR/S brings about for providers are several:

(1) Automated statistical review can enable the State Medicaid programs to focus investigative and corrective activity only on those providers whose practices are statistically variant enough to be suspect — thus, from the beginning the provider who is simply giving good quality medical care, as measured by the performance of his peers, is dropped from consideration by the State agency. The other side of the coin is that *all* statistically abberant practices can be brought to light, and only those most worrisome investigated. While it may well be that differences in patient pool, practice conditions, and so on, explain the anomalies, it is often typically the case that a situation which actually requires corrective action — ranging from educational contacts through provider groups to prosecution for fraud and abuse — is found. It is *known* that the majority of providers pose no problems for the program in fraud/abuse and quality-of-care areas. The regulatory mode of control, however, (as with laws in general) is of necessity *universal.* It is submitted that the only real alternative to regulation is something like automated review combined with appropriate corrective action.

(2) As mentioned earlier, S/URS profiles can provide a sophisticated analysis of physicians' practices. In cases where a physician should be informed of aspects of his practice that are statistically variant, some States have followed the practice of sending the profile to the physician with an explanation of the questionable items. It is often quite a surprise for the practitioner to see that he has prescribed, say, Darvocet-N for 78% of his Medicaid patients. (Use of profiles in this fashion in Florida succeeded in reducing the pharmacy cost to the State program by 6% in one year.)

(3) As noted above, S/URS provides profiles for patients as well as physicians. As patients' control over the services they receive is virtually nil, patient profiling is less useful as a management tool than physician profiling. It may be useful, however, for a *physician* to review profiles for his or her patients. This review may reveal to the physician that the patient has received prescriptions for incompatible drugs from another physician, that duplicative treatments are being given, and so on. In these cases, action by the physicians involved will both improve quality of care and reduce program costs.

(4) Local medical societies, in the past, have not had access to the types or volume of information that S/URS can provide. They have had some information, but not on so detailed a statistically analyzed basis. S/URS makes available a complete picture of the therapeutic practices of all health professionals who treat Medicaid patients. The opportunity for developing educational programs, based on S/URS analysis, in areas that might not have previously been considered is obvious. Similar opportunities exist for medical schools, Professional Standards Review Organizations, etc.

(5) Ideally, any requirements placed upon physicians by States beyond those for licensure should aim at further professional education, correction of known deficiencies, etc., and not "shotgun" re-examinations or further bureaucratic requirements. S/URS and S/URS-type analysis can aid State officials in "focussing" professional development requirements on *known* deficiencies.

Fairly recent studies indicate that requiring continuing education in prescribing practices is an obvious place to begin.

(6) It should be noted that S/URS can also serve a *protective* function. In the case where it is asserted that a physician has engaged in poor medical practice in regard to a particular Medicaid patient for instance, S/URS can produce not only the physician's typical pattern of treatment for the diagnosis or diagnoses involved, but also a complete record of the treatment billed for the patient in question. This is compared with the typical pattern of care of physicians in relevant subgroups; thus a complete and thoroughly analyzed record is immediately available. Further questions can be based on facts rather than accusations and defenses.

The list of possible devices whereby S/URS and similar automated review methods can serve the physician community could be continued. The major points to be stressed are these: (a) demands placed on the Federal financing of health care, the Medicaid program in particular, are such that program officials *must* develop such devices; (b) the physician population cannot avoid the effects of the political and social context in which the program operates; and (c) S/URS and similar automated review devices seem to be the best solution to the problems in the Medicaid program for both managers and providers.

Summary

Implementation of automated review of provider practices by the Medicaid program ought to be viewed as worthy of support.

With a sustained automated review effort, one can project that the worst providers will be removed from the program, and that the best are left. Over a long term, this means that pressures on physicians, dentists, and others, should decrease, and calls for further regulation can at, least, be mitigated. Active support of automated review efforts may be the best way that providers can ensure that they are subjected to the least possible scrutiny and interference as they continue their delivery of health care to the poor.

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Medicaid Coverage of the Mentally Ill

(EDITOR'S NOTE: From time to time, the Journal plans to publish a capsule review of various Medicaid requirements which should be useful for program managers and their staff. The Journal welcomes suggestions from its readers as to particular requirements or problem areas that should be highlighted in this way.)

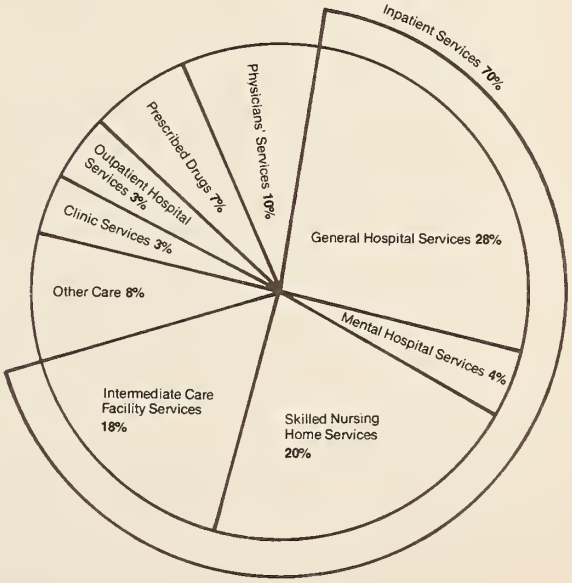
Mental health coverage of Medicaid eligible recipients may be accomplished through a variety of services under the Medicaid program, depending on Federal and State requirements, the particular needs of the recipients, and available State resources.

Federal matching for mental health services is available for the services that States are required to provide and those which are optional. The Federal statute (Title XIX of the Social Security Act), however, does not provide for coverage of every possible mental health service for every eligible individual's needs. This is an area which has traditionally been a responsibility of the States and for which Congress has not yet authorized complete Medicaid participation. Thus, there will be instances in which it will be necessary for the State to arrange for or provide the needed services through other funding mechanisms or programs.

Federal matching is available for inpatient psychiatric services in Title XIX institutions for mental diseases but is limited to services to individuals age 65 and over, and services to individuals age 21 and under in psychiatric facilities. There is no such limitation on outpatient services in these institutions. Under Federal regulations and policies, an institution for mental diseases is a facility established and maintained primarily for the care and treatment of individuals with mental diseases. Mental disease has been broadly interpreted to include disabilities in mental functioning resulting from a variety of causes as specified under the heading of mental diseases in the Eighth Edition, International Classification of Diseases (ICDA-8, PHS Publication No. 1963). However, in general skilled and intermediate care facilities some of the patients may receive mental health care and the over 65 limitation would not be applicable, provided that these facilities are not primarily engaged in caring for mentally ill patients.

Only partial data is available on Federal/State Medicaid payments for mental health services. More complete data is not available

Percent Distribution of Medicaid Dollars by type of service fiscal year 1975



Source: NCSS Report B-5

because physician, clinic, inpatient hospital, skilled nursing facility and intermediate care facility services are not generally broken out by diagnoses in the data collected.

The only figures available, for service in psychiatric hospitals, show that expenditures amounted to 4% of the total Medicaid expenditures in FY 1975. (See chart).

This percentage represents only a fraction of the mental health expenditures under Medicaid as psychiatric hospital services are obviously only one out of a number of other mental health services. Collecting mental health services data on all mental health services provided under the Medicaid program, is a future Departmental goal as States expand their services and learn more about what mental health services may be Federally matched.

Services Covered

There are 14 identifiable mental health service areas eligible for Federal matching under Medicaid. Of these 14 the following 5 fall within the required services for the categorically needy:

1. Inpatient hospital services including psychiatric units: These services must be available in the psychiatric unit of a general hospital to the same extent as other clinical services.
2. Outpatient hospital services: Such services must be available on the same basis to eligible individuals without reference to diagnosis when provided by a general hospital or a psychiatric hospital qualified to participate in Title XIX.
3. Physician services: These services must be available to the mentally ill on the same basis as to other eligible recipients and, services of psychiatrists must be included on same basis as those of other physicians.
4. Other laboratory and X-ray services: When not done in physicians' offices, hospitals, etc., these services are covered.
5. Skilled nursing facility services (other than in an institution for tuberculosis and mental diseases): These services are required for those over age 21, optional for those under 21.

The following services are optional for State programs, except for the special conditions set out in Item 3:

1. Inpatient psychiatric hospital services: Federal funds are available for those 65 and over in a hospital for mental diseases meeting standards for Title XVIII. Psychiatric facility services for individuals age 21 and under in a JCAH accredited psychiatric facility.
2. Clinic services (free-standing clinics): The majority of health centers qualify for participation only under this service. This can also include community mental health centers.
3. Day care, night care, partial hospitalization (when not considered inpatient hospital services): This is a required service, when provided as part of outpatient hospital service, optional, when provided as part of "free-standing" clinic service.
4. Clinical psychologist or psychiatric social worker (individual practitioner): IF such practitioners are State licensed within Title XIX definition and IF elected for inclusion in State plan as "other practitioner", payments for services may be made directly to qualified individual practitioner.
5. Clinical psychologist or psychiatric social worker (staff member of outpatient hospital or free-standing clinic): These services are coverable in outpatient hospital services and clinic services, IF salaried members of such staff and salaries are part of overall costs on which fees are based. Payments are made on cost per visit basis directly to the hospital or outpatient facility providing service.
6. Intermediate care facility services (other than in an institution for tuberculosis or mental diseases).
7. Skilled nursing facility services in an institution for mental diseases: An optional service, this is limited by statute to individuals 65 and over.

8. Intermediate care facility services in institutions for mental diseases: This optional service is limited by statute to persons age 65 or over.
9. Prescribed drugs: This would include psychotropic drugs.

Custodial, domiciliary, residential, or educational institutions for mentally ill individuals (whether called hospitals, nursing facilities, schools, homes, etc.) are not covered under Medicaid.

Prepared by: Health Services Branch, Division of Policy and Standards, Medicaid Bureau

Major References: 45 CFR 249.10 (b) (1) (2) (5) (9) (14) (16)

RESEARCH AND DEMONSTRATION ACTIVITY REPORT—RADAR

(EDITOR'S NOTE: RADAR will be a periodic feature of the *Journal for Medicaid Management*, reporting on research, demonstration, and evaluation projects pertinent to the Medicaid program. While the results of projects of significant interest for Medicaid management will be reported in separate articles as available, preliminary results and proposed studies will be reported here. States conducting generally applicable research and demonstration projects are invited to share results with the *Journal*, so that management ideas can be made available to our readers.)

Despite continuing efforts on the part of the Medicaid Bureau and several of the States to install the Medicaid Management Information System (MMIS) which can provide relatively complete data on program operations, national policy formulation and program surveillance have been handicapped by lack of data on many aspects of the program. This lack has been detrimental to the States as well. If a particular policy will have an undesirable effect on one or two States, due to local peculiarities, this fact cannot be considered in policy formulation unless data on such unique conditions is available. Two of the current evaluation projects reported for this issue involve data acquisition.

The PAS Study

The PAS length of stay study is the most ambitious compilation of length-of-stay data on Medicaid patients attempted to date. This study uses the resources and expertise of the University of Michigan's School of Public Health; the data comes from the 1975 history file of the Professional Activity Study (PAS). The PAS study is an ongoing analysis of various parameters (length of stay by diagnosis, incidence of surgery by diagnosis, frequency of diagnosis, etc.) related to medical care in the United States.

Data produced by the study includes information on the lengths of stay of Medicaid and non-Medicaid patients for 350 diagnoses (determined by the final diagnosis prior to discharge) from 2000 acute care hospitals. The two populations are compared *via* a number of different tables. The tables produced by the study to date compare total number of patients and total days of stay for each of the 350 diagnoses accounting for the largest number of patients. Two additional sets of tables, displaying the same data for the ten HEW Regions, and for the thirty most populous States are also being produced. It should be stressed, however, that the data are drawn from a nationwide file of those hospitals which participate in the PAS system.

Additional reports which the study will produce at a later time will give similar breakdowns by single or multiple diagnosis, by surgery status (operated/not operated upon) and by ages, from 0 to 65+ years, in five groups.

The PAS data are not sample data; what is produced by the computer is a compilation of all Medicaid and non-Medicaid discharges for 1975 for the 2000 hospitals. Thus, while questions of the representativeness of the PAS hospitals themselves (in terms of the nation as a whole) can be raised, problems of sample design will in no way affect this study. The only cautionary note required is on the identification of the Medicaid patients.

Because of the data sources used, this is based on expected Medicaid-eligible status at time of admission, and not actual source of payment after discharge. While it can be presumed that hospitals checked closely, some measure of error is introduced by this factor.

While the print-outs from the computer are still being received and only limited preliminary work has been done, some very interesting conclusions have emerged from the statistical analysis undertaken. Based only on the national data for total patients and total days of stay

per diagnosis, for the fifty most prevalent diagnoses, the following can be concluded:

1) The average length of stay for Medicaid patients is 7.255 days and for non-Medicaid patients, 7.217 days. The difference of 0.04 days, or about one hour, is not statistically significant at the 0.01 level. This means that there are 99 chances out of 100 that this one-hour difference is solely due to random variations in the population. Based on this study, there is no evidence that the average stays of Medicaid and non-Medicaid patients differ in reality.

2) The study also answers the question whether there is a greater variation in the length of stay for Medicaid patients. The tendency to differ is usually measured by the variance, designated by s^2. The variance is the square of the standard deviation, a measure that can be thought of intuitively as the "average deviation from the average." S^2 for Medicaid is 13.870 $days^2$, for non-Medicaid, 14.924 $days.^2$ The respective standard deviations are 3.72 and 3.86 days. The difference of 0.14 days, or 3.36 hours, is not statistically significant at the 0.01 level.

3) There is apparently a significant difference in the relative frequency of occurrence of a number of diagnoses in the two populations. For example, diabetes accounts for 0.99% of Medicaid patients versus 1.63% of non-Medicaid patients, while hypertrophy of tonsils and adenoids accounts for 3.09% of Medicaid patients but only 1% of non-Medicaid patients. Some of the differences are, of course, due to the differences in the typical age of the Medicaid population, and the fact that many of the elderly poor are covered under Medicaid. To determine if there is a significant *overall* difference due to the diagnosis mix, one may check whether the form of the frequency distributions of diagnoses are the same. (A frequency distribution is a mathematical statement of the *number of occurrences* of a particular value associated with a population.) Since the data showed that the mean lengths of stay are not significantly different, if it should turn out that the frequency distributions are not significantly different either, it would then be the case that the total number of patient days produced by the Medicaid diagnosis mix would be about the same as that produced by the non-Medicaid mix.

An application of a test known as the Kruskal-Wallis One-Way Analysis of Variance shows that the form of the frequency distributions are not significantly different (at the 0.01 level.) This is in part due to the fact that after the first ten or so major diagnoses are considered, the rest of the 350 account for very small segments of the total number of patients and days.

There are a number of plans for further analysis of the PAS data. Pertinent results will be reported in later RADAR articles.

Comparative Surgery Utilization Study

Although a contract for this study has not yet been let, the study design has been completed. The study objectives are: (1) to determine the extent to which there are differences in surgical procedure rates, and differences in the average length of stay, between the Medicaid-eligible population and a segment of the general public covered under a major private health insurance program, and (2) to provide aggregate utilization and cost data for Medicaid and non-Medicaid inpatient admissions, with surgical admissions as a subgroup.

Data will be drawn from private health insurance records and from State records (in States which have data systems capable of meeting the study objectives). Potential States are California, Colorado, Delaware, Indiana, Iowa, Kansas, Mississippi, Vermont, and Wisconsin.

Data will be broken out in four age groups, for all Medicaid eligibles and for those eligible for more than six months, by overall procedure rate and average length-of-stay by surgical procedure, by total inpatient admission rate, by average hospital cost per surgery admission, and average hospital cost per inpatient admission, per diagnosis. As far as the data base permits, calendar year 1976 data will be used.

The issue of "unnecessary surgery" has received considerable Congressional and public attention in the last two years. The data

capacity of the Medicaid program has been a complicating factor. Data collected by the House Commerce Committee's Subcommittee on Oversight and Investigations display some anomalies. For example, an extremely low correlation between rates of surgery reported for 1973/74 and for 1975 is shown, which may indicate that this data may not be completely reliable. It is anticipated that this study, in addition to providing "solid" data, will serve as a check on data from the PAS study, as the Medicaid eligibility of patients will be drawn from State files.

Impact of Inappropriate Drug Therapy on Hospital Admissions Study

The Medicaid and Medicare programs, with their dramatic impact on the structure of American health care, have raised numerous questions and opened up areas of research which might otherwise have remained relatively untapped. One of these is the incidence of disease induced by inappropriate prescription or use of drugs. The study proposed will be the first large-scale effort to measure the impact of inappropriate drug therapy in the Medicaid population, with hospital admissions caused or complicated by iatrogenic effects as the main measure.

Three hospitals with relatively large Medicaid billings in three States will be selected. At least one of the hospitals in each of the States will not be a large teaching hospital. The study population will be all Medicaid patients for the last five months (prior to the inception of the study) in each hospital.

Claims histories for providers and recipients will be examined for drug-related diagnoses. For each patient whose diagnosis is suspected of having a drug-therapy related etiology, the contractor will obtain a drug history for the six months prior to admission. Hospital records will be cross-checked to verify the computer information. Based on the record alone, the appropriateness of the therapy used, and the effects of inappropriate drug therapy, will be assessed by clinical pharmacists. The effects on rate of admissions and length of stay will be analyzed. A presentation of the results of the project will be made at an Institute - sponsored National Conference on MAC/EAC and Drug Services to be held in October, 1977, in Albuquerque, New Mexico.

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Holahan, John, et al, *Altering Medicaid Provider Reimbursement Methods,* The Urban Institute, Washington, D.C., June 1977.

Holahan, John, Scanton, William, and Spitz, Bruce, *Restructuring Federal Medicaid Controls and Incentives,* The Urban Institute, Washington, D.C., June 1977.

This is a four part series that reviews alternate strategies for controlling the cost of State Medicaid programs. Funded by the National Center for Health Services Research, the series systematically examines (1) State options which are permitted by Federal regulations, and (2) State options which would improve the efficiency and effectiveness of the program. Possible changes in Federal regulations and financing mechanisms are suggested. The subject areas the four volumes cover are Medicaid eligibility, benefits, provider reimbursement and utilization control.

Mead, Lawrence M., *Institutional Analysis: An Approach to Implementation Problems in Medicaid,* The Urban Institute, Washington, D.C., April 1977.

This paper describes a form of policy analysis, called institutional analysis, using the Medicaid program as a case study. An interesting discussion of what happens between enactment of basic policy and final delivery of services is the result. Implementation problems in Medicaid are looked at in terms of long-range problems and explanatory factors. A discussion of Medicaid's administrative weaknesses and political constraints follows.

EPSDT - Does it Spell Health Care for Poor Children? A report by the Children's Defense Fund of the Washington Research Project, Inc., Washington, D.C., June 1977.

A general report on and guide to the EPSDT program. This book starts off describing what the program is and how it operates. A detailed analysis of problems found in the program follows, including many recommendations. Major findings of the report are: (1) Many children were not reached by EPSDT screening; (2) While screens uncovered a host of unmet health needs, screens were often incomplete and inadequate; (3) Many children did not receive the diagnosis and treatment they were found to need; (4) The capacity of EPSDT to find and help children with developmental problems was limited; (5) EPSDT rarely linked children to an ongoing source of primary care; and (6) Federal support and leadership in implementing EPSDT have been minimal. Federal enforcement has not been effective in assuring that eligible children receive benefits to which they are entitled. The Children's Defense Fund believes, however, that EPSDT holds great promise for health care for children if built-in deficiences are corrected.

Moss, Frank E. and Halamandaris, Val J., *Too Old, Too Sick, Too Bad: Nursing Homes in America,* Aspen Systems Corporation, Germantown, Maryland, 1977.

Senator Moss, after writing a 12 volume report on nursing homes for the Senate Committee on Aging entitled "Nursing Home Care in the United States: Failure in Public Policy," felt a need to go public with what he had found. This book tells the history of nursing homes, and surveys the condition they are in today. Giving good nursing homes their due, the book goes on to describe many of the abuses and underlying problems of the system. The book then analyses how the system could be improved and better managed.

Myers, Maven J. and Fink, Joseph L., III, "Liability Aspects of Drug Product Selection," *Journal of the American Pharmaceutical Association,* Vol. NS 17:1, January 1977. Pages 33-35.

The question is raised of the likelihood of liability and the exposure to liability by pharmacists in dispensing generics. This is an issue important to Medicaid as more States are promoting generic drugs. The authors conclude that the amount of liability does not appear to be great in the area of product source selection. There is, however, a greater responsibility assumed by the pharmacist, and the authors feel that in dispensing generics a current knowledge of drug products and a familiarity with FDA recall lists is needed.

Connelly, Kathleen, Cohen, Phillip K. and Walsh, Diana Chapman, "Periodic Medical Review: Assessing the Quality and Appropriateness of Care in Skilled Nursing Facilities," *New England Journal of Medicine,* Vol. 296:15, April 14, 1977. Pages 878-880.

This assessment of Periodic Medical Review of SNF's in Massachusetts feels that PMR's are an important step toward monitoring quality of care. Findings and conclusions include: n(1) Non-profit nursing homes were statistically more likely to be rated good or excellent than proprietary homes; (2) Lacking social history, PMR teams were unable to review rehabilitation potential; and (3) Financial incentives for transferring inappropriately placed patients out of single-level of care homes are too remote to outweight difficulties. These difficulties include administrative complxities and possible deterioration of a patient's condition caused by the move.

Sones, Sheldon S., and Halpryn, Louis J., "Connecticut Pharmacy's "PSRO" for Long-Term Care Facilities: A National Model?" *Journal of the American Pharmaceutical Association*, Vol. NS 17:1, January 1977. Pages 45-46.

A quick review shows satisfaction with Connecticut's Pharmacy Advisory Board as a professional standards review team for improving consultant pharmacy services in the State's three hundred long-term care facilities. The paper describes composition of the Board and initial activities in developing guidelines and standards for consultant pharmacy services.

Kirchner, Marian, "The Medicaid Crackdown that Cracked Up," *Medical Economics*, May 16, 1977. Pages 31-45.

The story of a mix-up in New York's fight against fraud and abuse. Notices alleging overpayments of up to $2000 were sent to physicians without indicating the last name of the patients for whom the charges were originally made. This report details how a SNAFU happens, and some of the repercussions.

Moss, Frank E., J.D., "Through the Medicaid Mills," *The Journal of Legal Medicine,* Vol. 5:5, May 1977. Pages 6-11.

Frank Moss relates his and his staff's experience in investigating Medicaid Mills in New York and Chicago, and tells of flagrant abuses encountered.

Fink, Joseph L., III, "Liability of Pharmacists Serving Skilled Nursing Facilities," *Journal of the American Pharmaceutical Association*, Vol. NS 17:2, February 1977. Pages 95-96.

A discussion of the legal responsibilities of a pharmacist who serves as a consultant to a skilled nursing facility. Potential liability is discussed in terms of both liability for breach of contract and liability for negligence (malpractice). Legal principles and expected legal standards of care are also covered.

Stolar, Michael H., "Conceptual Framework for Drug Usage Review, Medical Audit and Other Patient Care Review Procedures," *American Journal of Hospital Pharmacy*, Vol. 34:2, February 1977. Pages 139-145.

A synopsis of the role of the pharmacist in hospital utilization review, as required by PSRO's, the JCAH, SSA and other organizations. Particular areas covered are quality assurance programs, drug utilization review, peer review, medical audit, patient care audit, and medical care evaluation (MCE). The author attempts (and succeeds) in clarifying the confusion surrounding the terminology of hospital quality assurance programs.

Colner, Alan N., "The Impact of State Government Rate Setting on Hospital Management," *Health Care Management Review*, Vol. 2:1, Winter 1977. Pages 37-49.

Colner studies the experience of hospitals in three States where rates were set by government

agencies such as Medicaid. He finds that rate setting in Maryland, New Jersey, and Massachusetts has had a perceptible impact on hospital operations. One finding is that limiting hospital resources induces hospitals to budget more carefully and often cut costs. It also causes them to try to increase other sources of revenues by doing such things as increasing ancilliary services. How internal relations within hospitals are affected is reviewed, and the increased power of the budget officer is noted.

Kraus, Arthur S., et al., "The Role and Value of Foster Homes for the Elderly," *Canadian Journal of Public Health*, Vol. 68:1, January - February 1977. Pages 32-38.

A program of foster homes for the elderly in Niagara, Ontario is analyzed. The authors believe that in both the U.S. and Canada too many elderly are unnecessarily institutionalized because there are not enough community support services for the infirm elderly in their own homes or supportive group living arrangements short of institutionalization. The foster home residents were found to be generally satisfied with the arrangement, and the physical, mental and emotional state of residents was equal to that of a study group in Niagara's high quality nursing homes. The foster care concept is pushed by the authors as it saves costs over institutionalization, and as it may be a more appropriate setting for certain elderly unable or unwilling to live by themselves.

Hunt, T. E. and Crichton, R.D., "One Third of a Million Days of Care at Home, 1959 to 1975," *Canadian Medical Association Journal*, Vol. 116:12, June 18, 1977. Pages 1351-1355.

A defense of home health care, citing a program's fifteen years of experience in Saskatoon, Saskatchewan. The program is described along with its experiences in rehabilitating patients. Cost savings of over 500% as compared with institutional costs are cited. The author believes the program to be a success for both humanistic and economic reasons.

" Volume Purchase Test Will Begin on July 1," *American Druggist*, Vol. 175:5, May 1977. Page 15.

A report on California's Volume Purchase Plan (VPP) for Medicaid drugs. Under a revised plan, scheduled to go into effect July 1, 1977, suppliers will bid on rebate amounts to be given by the supplier to the State. Contracts will be awarded to suppliers that provide the State with the lowest net cost. The State is requesting pharmacists to dispense the State designated brand, and will pay pharmacists a 30 cent incentive per prescription. The article gives a history and details of the program.

"HEW Proposes MAC Limit for 6 More Drug Products," *American Druggist*, Vol. 175:5, May 1977. Page 19.

HEW is taking first steps on implementing MAC limits on six more products. This decision came about as a result of HEW winning a court suit challenging the legality of the MAC program. New drugs to be included are penicillin VK and ampicillin.

Federspiel, Charles F., Ph.D., Ray, Wayne A., M.S. and Schaffner, William, M.D., "Medicaid Records as a Valid Data Source: The Tennessee Experience," *Medical Care*, Vol. XIV:2, February 1976. Pages 166-172.

The thesis of the authors is that Medicaid claim files are a suitable data base for research, especially in States where automated data bases reduce errors. As a budget saver, Medicaid claims files offer an attractive alternative to expensive new systems of data collection and analysis.

CALENDAR OF TRAINING CONFERENCES AND WORKSHOPS

INSTITUTE FOR MEDICAID MANAGEMENT

FY 1978

ACTIVITY	LOCATION	DATE
Issues Relating to IPR and care for the Mentally Retarded	Kansas City, Missouri	September 7-9, 1977
Third Party Multi-State Workshops	Dallas, Texas	September 13-14, 1977
Third Party Multi-State Workshops	—	January '78 (tentative)
Third Party Multi-State Workshops	—	February '78 (tentative)
Third Party Multi-State Workshops	—	March '78 (tentative)
Third Party Multi-State Workshops	—	April '78 (tentative)
Federal/State-Training Meetings: Needs, Resources, Planning		
Regions IV and VI	New Orleans, Louisiana	September 15-16, 1977
Regions I, II, and III	Philadelphia, Pennsylvania	September 19-20, 1977
Regions V and VII	St. Louis, Missouri	September 26-27, 1977
Regions VIII, IX, and X	San Francisco, California	September 28-29, 1977
Professional Relations — PSRO Monitoring— Planning Session	Chicago, Illinois	October 3-4, 1977
Management of State Drug Programs Conference	Albuquerque, New Mexico	October 18-20, 1977
S/UR-Patient/Provider Profile and MARS Workshop	Selected States— Annapolis, Maryland	November (tentative)
Eligibility Workshop:		
Regions I, II, and III	Philadelphia, Pennsylvania	January '78 (tentative)
Regions IV, V, and VI	Memphis, Tennessee	January '78 (tentative)
Professional Relations— PSRO Monitoring	Orlando, Florida	December 13-15, 1977
S/UR-Patient/Profile and MARS Workshop	Selected States— San Francisco, California	December (tentative)

Eligibility Workshop:		
Regions VII and VIII		January '78 (tentative)
Regions IX and X		February '78 (tentative)
MDS - Reporting Requirements National Conference	Memphis, Tennessee	February '78 (tentative)
Orientation to Medicaid for New State Directors	New Orleans, Louisiana	March 7, 1978
State Medicaid Directors' Annual Meeting	New Orleans, Louisiana	March 7-10, 1978
Contracting and Contract Monitoring	Denver, Colorado	July '78 (tentative)
Fraud and Abuse Workshops	—	March '78 (tentative)
Fraud and Abuse Workshops	—	April '78 (tentative)
Fraud and Abuse Workshops	—	May '78 (tentative)
Erroneous Payments Workshops for States:		
Regions I and II	Boston, Massachusetts	April '78 (tentative)
Regions III and IV	Alexandria, Virginia	May '78 (tentative)
Regions V and VI	St. Louis, Missouri	June '78 (tentative)
Regions VII and VIII	Denver, Colorado	July '78 (tentative)
Regions IX and X	Portland, Oregon	September '78 (tentative)
Alternative Care - Conference on Deinstitutionalization	—	May '78 (tentative)
Regional Office Staff — S/UR-MARS Training:		
Region II	—	November 21-22, 77
Region III	—	December 5-6, 77
Region IV	—	October 24-25, 77
Region VII	—	January '78 (tentative)
Region IX	—	February '78 (tentative)

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ORDER FORM

For IMM reports which are available to State and Federal personnel who are directly concerned with the Medicaid program:

- ☐ *Papers from the Third Party Liability Workshop* - Chicago Conference, July 27-28, 1977
- ☐ *A Guide for the Control of Erroneous Medicaid Expenditures* - July 30, 1976
- ☐ *Conference Report for the Erroneous Expenditures Conference,* San Francisco, California - February 22-24, 1977
- ☐ *State Practice for Recovery of Third Party Resources in the Medicaid Program* - March 17, 1977
- ☐ *Journal for Medicaid Management* - Spring 1977

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